

Applicant : Henrik Glent-Madsen  
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**Amendments to the Claims:**

This listing of the claims will replace all prior versions and listings of claims in this application.

**Listing of Claims:**

1. (currently amended) A method~~Method~~ for establishing a light beam with substantially constant luminous intensity, comprising the steps of:  
[[- ]]establishing a light beam by means of a light source; and  
[[- ]]controlling an attenuation of said light beam on the basis of occurrences of luminous intensity peaks in said light beam[[- .]]; and wherein  
said controlling an attenuation step comprises applying a first level of attenuation to said light beam at times where the luminous intensity of said light beam assumes a magnitude of an intensity floor and applying a further level of attenuation to the said light beam at times where luminous intensity peaks occur; and  
said further level of attenuation step is proportioned to the magnitude differences between said luminous intensity peaks and said luminous intensity floor.

2. (currently amended) A method~~Method~~ for establishing a light beam according to claim 1,  
wherein~~whereby~~ said luminous intensity peaks occur periodically.

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3. (currently amended) A method~~Method~~ for establishing a light beam according to claim 1,  
wherein whereby-said luminous intensity peaks may at least within a particular time interval be  
considered of substantially equal magnitude.

4. (currently amended) A method~~Method~~ for establishing a light beam according to claim 3,  
wherein whereby-said particular time interval is at least 50 hours.

5-6 (canceled)

7. (currently amended) A method~~Method~~ for establishing a light beam according to claim 1,  
wherein whereby-said attenuation is achieved by means of a variable attenuation device~~means~~.

8. (currently amended) A method~~Method~~ for establishing a light beam according to claim 7,  
wherein whereby-said variable attenuation device~~means~~ is capable of applying at least two  
different levels of attenuation to said light beam.

9. (currently amended) A method~~Method~~ for establishing a light beam according to claim 8,  
wherein whereby-one of said at least two different levels of attenuation represents substantially  
no attenuation.

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10. (currently amended) A method~~Method~~ for establishing a light beam according to claim 9,  
wherein whereby an attenuation control device~~means~~ is coupled to said variable attenuation  
device~~means~~.

11. (currently amended) A method~~Method~~ for establishing a light beam according to claim 10,  
wherein whereby said attenuation control device~~means~~ controls which of said at least two  
different levels of attenuation that is applied to said light beam by ~~means of~~ an attenuation  
control signal.

12. (currently amended) A method~~Method~~ for establishing a light beam according to claim 11,  
wherein whereby said attenuation control device~~means~~ is coupled to a lamp driver that drives  
said light source.

13. (currently amended) A method~~Method~~ for establishing a light beam according to claim 12,  
wherein whereby said attenuation control device~~means~~ controls a timing of said luminous  
intensity peaks by ~~means of~~ a lamp driver control signal.

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14. (currently amended) A method~~Method~~ for establishing a light beam according to claim 12,  
wherein whereby-said attenuation control device~~means~~ controls a magnitude of said luminous  
intensity peaks[D]] by ~~means of~~a lamp driver control signal.

15. (currently amended) A method~~Method~~ for establishing a light beam according to claim 10,  
wherein whereby-said attenuation control device~~means~~ receives a lamp driver reference signal  
comprising information on properties of said luminous intensity peaks.

16. (currently amended) A method~~Method~~ for establishing a light beam according to claim 15,  
whererin whereby-said attenuation control device~~means~~ controls which of said at least two  
different levels of attenuation that is applied to said light beam by ~~means of~~said attenuation  
control signal at least partly on the basis of said lamp driver reference signal.

17. (currently amended) A method~~Method~~ for establishing a light beam according to claim 14,  
wherein whereby-said attenuation control device~~means~~ receives an attenuation reference signal  
comprising information on properties of said variable attenuation device~~means~~.

18. (currently amended) A method~~Method~~ for establishing a light beam according to claim 17,  
wherein whereby-said attenuation control device~~means~~ controls properties of said luminous

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intensity peaks by means of said lamp driver control signal at least partly on the basis of said attenuation reference signal.

19. (currently amended) A method~~Method~~ for establishing a light beam according to claim 13,  
wherein whereby said attenuation control device~~means~~ receives a light beam reference signal derived from an intensity measuring device adapted to measure the intensity of the light beam.

20. (currently amended) A method~~Method~~ for establishing a light beam according to claim 19,  
wherein whereby said attenuation control device~~means~~ receives a constant light beam reference signal derived from an intensity measuring device adapted to measure the intensity of said substantially constant intensity light beam.

21. (currently amended) A method~~Method~~ for establishing a light beam according to claim 20,  
wherein whereby said attenuation control device~~means~~ controls properties of said luminous intensity peaks by means of said lamp driver control signal at least partly on the basis of said light beam reference signal, said constant light beam reference signal or a combination thereof.

22. (currently amended) A method~~Method~~ for establishing a light beam according to claim 20,  
wherein whereby said attenuation control device~~means~~ controls which of said at least two

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different levels of attenuation that is applied to said light beam by means of said attenuation control signal at least partly on the basis of said light beam reference signal, said constant light beam reference signal or a combination thereof.

23. (currently amended) A method~~Method~~ for establishing a light beam according to claim 12, wherein whereby said attenuation control device~~means~~ controls said variable attenuation device~~means~~, said lamp driver or both at least partly on a basis of predefined settings.

24. (currently amended) A method~~Method~~ for establishing a light beam according to claim 12, wherein whereby said attenuation control device~~means~~ continuously controls said variable attenuation device~~means~~, said lamp driver, or both.

25. (currently amended) A method~~Method~~ for establishing a light beam according to claim 10, wherein whereby said attenuation control device~~means~~ establishes a synchronization between a timing of the application of said first and further levels of attenuation and the timing of said luminous intensity peaks.

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26. (currently amended) A method~~Method~~ for establishing a light beam according to claim 15,  
wherein whereby said variable attenuation device~~means~~ is a multi-level variable attenuation  
device~~means~~.

27. (currently amended) A method~~Method~~ for establishing a light beam according to claim 26,  
wherein whereby said multi-level variable attenuation device~~means~~ is capable of applying  
infinite levels of attenuation to said light beam.

28. (currently amended) A method~~Method~~ for establishing a light beam according to claim 27,  
wherein whereby-said attenuation control device~~means~~ controls which of said infinite levels of  
attenuation that said multi-level~~multilevel~~ variable attenuation device~~means~~ applies to the light  
beam at least partly on the basis of a magnitude difference between the intensity peaks and the  
intensity floor.

29. (currently amended) A method~~Method~~ for establishing a light beam according to claim 28,  
wherein whereby-said attenuation control device~~means~~ regulates which of said infinite levels of  
attenuation that said multi-level~~multilevel~~ variable attenuation device~~means~~ applies to the light  
beam at least partly on the basis of feedback from a constant light beam intensity measuring  
device.

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30. (currently amended) A method~~Method~~ for establishing a light beam according to claim 27,  
wherein ~~whereby~~ said attenuation control device~~means~~ controls which of said infinite levels of  
attenuation that said multi-level~~multilevel~~ variable attenuation device~~means~~ applies to the light  
beam at least partly on the basis of user input.

31. (currently amended) A method~~Method~~ for establishing a light beam according to claim 27,  
wherein ~~whereby~~ said attenuation control device~~means~~ controls which of said infinite levels of  
attenuation that said multi-level~~multilevel~~ variable attenuation device~~means~~ applies to the light  
beam at least partly on the basis of said lamp driver reference signal.

32. (currently amended) A method~~Method~~ for establishing a light beam according to claim 26,  
wherein ~~whereby~~ said attenuation control device~~means~~ controls which of said infinite levels of  
attenuation that said multi-level~~multilevel~~ variable attenuation device~~means~~ applies to the light  
beam at least partly on the basis of an elapsed time of light source usage.

33. (currently amended) A method~~Method~~ for establishing a light beam according to claim 10,  
wherein ~~whereby~~ said attenuation control device~~means~~ promotes compensation for light beam  
property changes caused by prolonged use of said light source.

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34. (currently amended) A method~~Method~~ for establishing a light beam according to claim 33,  
wherein ~~whereby~~ said light beam property changes comprise~~comprises~~ intensity peak magnitude changes.

35-67 (canceled)

68. (currently amended) A method~~Method~~ for establishing a light beam according to claim 1,  
wherein ~~whereby~~ the luminous intensity of said established light beam with substantially constant luminous intensity is completely constant.

69. (currently amended) A method~~Method~~ for establishing a light beam according to claim 1,  
wherein ~~whereby~~ the luminous intensity of said established light beam with substantially constant luminous intensity is constant within a tolerance of  $\pm 50\%$ .

70. (currently amended) A method~~Method~~ for establishing a light beam according to claim 69,  
wherein ~~whereby~~ the luminous energy conducted by said established light beam with substantially constant luminous intensity during one peaking period is within  $\pm 10\%$  of the luminous energy conducted during a nominal period.

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71. (currently amended) A method~~Method~~ for establishing a light beam according to claim 1,  
wherein ~~whereby~~ said light source is a short arc lamp.

72. (currently amended) A method~~Method~~ for establishing a light beam according to claim 12,  
wherein ~~whereby~~ said lamp driver establishes an alternating current with current peaks for  
driving said light source.

73. (currently amended) A method~~Method~~ for establishing a light beam according to claim 12,  
wherein ~~whereby~~ said lamp driver establishes a direct current with current peaks for driving said  
light source.

74. (currently amended) Use of said~~the~~ method according to claim 1 in a light modulating  
arrangement used for photolithography.

75. (currently amended) Use of said~~the~~ method according to claim 1 in a light modulating  
arrangement used for image projection.

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76. (currently amended) An apparatus establishing a light beam with substantially constant luminous intensity, comprising:

a light source establishing a light beam[[],];

a variable attenuation ~~meansdevice;~~ and

an attenuation control ~~device~~means; and

wherein said light beam is moderated to have a substantially constant luminous intensity in accordance with said by means of the method set forth in accordance to claim 1.